



EMISSIONS CERTIFICATION-MANUFACTURER TOPICS
HARLEY-DAVIDSON MOTOR COMPANY
MARCH 9th, 2005, EPA - ANN ARBOR, MICHIGAN

. REPRESENTATIVE EMISSIONS TESTING

15,000 km, 3,500 km, comparative testing

**. CERTIFICATION VALUES, FELS,
CORPORATE AVERAGING.**

40 CFR 86.449

. ENGINE FAMILY CONCEPTS

40 CFR 86.420-78 : Cooling, combustion, cylinders,
catalysts or after treatment.

**. THE NEW STANDARDS and EMISSIONS CONTROL
FOR THE FUTURE**

COMMON FAMILY INFORMATION

2.00 STATEMENT OF BUSINESS CONFIDENTIALITY

1. Which information in the application for certification is considered to be entitled to confidential treatment until model introduction?

Projected sales, estimated production volumes and new technology for Harley-Davidson motorcycles are considered to be confidential data, and pages of this application containing this information are marked "CONFIDENTIAL" at the top. These pages are:

4.00-2, 4.00-3, 4.00-4
6.00-1, 6.00-2, 6.00-3, 6.00-4
8.01-1, 8.01-1.1
8.01-2, 8.01-2.1
8.01-3, 8.01-3.1
8.01-4, 8.01-4.1
8.01-5, 8.01-5.1
8.01-6, 8.01-6.1
8.01-7, 8.01-7.1
9.01-1, 9.01-1.1
9.01-2, 9.01-2.1
9.01-3, 9.01-3.1
9.01-4, 9.01-4.1
9.01-5, 9.01-5.1
9.01-6, 9.01-6.1
9.01-7, 9.01-7.1

2. Which information in the application for certification is considered to be entitled to continuing confidential treatment after model introduction?

4.00-2, 4.00-3, 4.00-4

Issue Date	Revision No.:	4	5	6	7	8	
8/03/87	Revision Date:	4/15/97	4/17/00	5/01/01	05/01/02	05/30/03	

03.00 MAINTENANCE AND WARRANTY

03.01 Maintenance Instructions

Regular Service Intervals For Sportster Models

Relevant Engine Families: 5HDXC01.2CEA, 5HDXC01.2CEB

ODOMETER READING	1 0 0 0 0 mi	5 0 0 0 0 mi	1 0 0 0 0 mi	1 5 0 0 0 mi	2 0 0 0 0 mi
	1 6 0 0 0 km	8 0 0 0 0 km	1 6 0 0 0 km	2 4 0 0 0 km	3 2 0 0 0 km
SERVICE OPERATIONS (see chart code below)					
Change engine oil and filter.	R	R	R	R	R
Inspect air cleaner, service as required.	I	I	I	I	I
Change primary chaincase lube and clean drain plug.	RI	RI	RI	RI	RI
Check and adjust rear belt.	I	I	I	I	I
Adjust primary chain.	A	A	A	A	A
Clutch adjustment.	I	I	I	I	I
Change transmission lube and clean drain plug.	R	R	R	R	R
Inspect brake pad linings and discs for wear.	I	I	I	I	I
Check brake fluid reservoir levels and condition.	I	I	I	I	I
Lubricate brake caliper pins.			L		L
Inspect oil lines and brake system for leaks.	I	I	I	I	I
Lubricate front brake hand lever, throttle control cables, clutch control cables (and hand lever), and rear brake pedal bushing (if applicable).	IL	IL	IL	IL	IL
Lubricate jiffy stand.	L		L		L
Steering head bearings.	A		AL		AL
Check, adjust operation of enrichener, throttle control.	I	I	I	I	I
Inspect fuel valve, lines and fittings for leaks.	I	I	I	I	I
Clean fuel tank filter screen.					
Check operation of all electrical equipment & switches.	I	I	I	I	I
Check battery and clean connections.	I	I	I	I	I
Change spark plugs.	I	I	R	I	R
Check tire pressure and inspect tread.	I	I	I	I	I
Check wheel spoke tightness.		I	I	I	I
Change front fork oil.					X
Replace rear fork bearings.					
Check engine mounts.			I		I
Check tightness of all critical fasteners: hand controls, brake system, axle nuts, front fork components, riser and handle bar fasteners.	T		T		T
Check ignition timing.		I	I	I	I
Check engine idle speed.	I	I	I	I	I
Change brake rubber components in master cylinders and calipers.					
Road test.	X	X	X	X	X
Chart Codes: I – Inspect, & if necessary correct, clean or replace. L – Lubricate with specified lubricant. A – Adjust. X – Perform. R – Replace or change. T – Tighten to proper torque. D – Disassemble (lube & inspect).					

ISSUE DATE	REVISION NO.:	1	2	3			
05/01/01	REVISION DATE:	05/01/02	05/30/03	05/12/04			

3.02 Emission System Warranty Statement

HARLEY-DAVIDSON EMISSION CONTROL SYSTEM WARRANTY

The following warranty applies to the emission control system and is in addition to the LIMITED WARRANTY, and NOISE CONTROL SYSTEM WARRANTY.

Harley-Davidson Motor Company warrants to the first owner and each subsequent owner that this vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Federal Environmental Protection Agency at the time of manufacture and that it is free from defects in materials and workmanship which cause this motorcycle not to meet U.S. Environmental Protection Agency Standards within 5 years or 18,641 miles (30,000 kilometers) whichever occurs first.

The warranty period shall begin on the date the motorcycle is delivered to the first retail purchaser or, if the motorcycle is placed in service as a demonstrator or company vehicle prior to sale at retail, on the date it is first placed in service.

THE FOLLOWING ITEMS ARE NOT COVERED BY THE EMISSION CONTROL SYSTEM WARRANTY

1. Failures which arise as a result of misuse, alterations, accident or non-performance of maintenance as specified in the Owner's Manual.
2. The replacement of parts (such as spark plugs, fuel and oil filters, etc.) used in required maintenance.
3. Loss of time, inconvenience, loss of motorcycle use or other consequential damages.
4. Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.

RECOMMENDATIONS FOR REQUIRED MAINTENANCE

IT IS RECOMMENDED THAT ANY EMISSION SYSTEM MAINTENANCE BE PERFORMED BY AN AUTHORIZED HARLEY-DAVIDSON DEALER USING GENUINE HARLEY-DAVIDSON REPLACEMENT PARTS. THE MAINTENANCE, REPLACEMENT OR REPAIR OF THE EMISSION CONTROL SYSTEM MAY BE PERFORMED BY ANY OTHER QUALIFIED SERVICE OUTLET OR INDIVIDUAL. NON-GENUINE PARTS MAY BE USED ONLY IF SUCH PARTS ARE CERTIFIED TO COMPLY WITH U.S. ENVIRONMENTAL PROTECTION AGENCY STANDARDS.

Harley-Davidson Motor Company, P.O. Box 653 Milwaukee, Wisconsin 53201, U.S.A.

HARLEY-DAVIDSON NOISE CONTROL SYSTEM WARRANTY

The following warranty applies to the noise control system and is in addition to the LIMITED WARRANTY, and EMISSION CONTROL SYSTEM WARRANTY.

Harley-Davidson Motor Company warrants to the first owner and each subsequent owner that this vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Environmental Protection Agency (as tested following F-76 Drive-By test procedure) at the time of manufacture and that it is free from defects in materials and workmanship which cause this motorcycle not to meet U.S. Environmental Protection Agency Standards within 1 year or 3,730 (6,000 kilometers) whichever occurs first.

The warranty period shall begin on the date the motorcycle is delivered to the first retail purchaser or, if the motorcycle is placed in service as a demonstrator or company vehicle prior to sale at retail, on the date it is first placed in service.

THE FOLLOWING ITEMS ARE NOT COVERED BY THE NOISE CONTROL SYSTEM WARRANTY

1. Failures which arise as a result of misuse, alterations, or accident as specified in the Owner's Manual.
2. Replacing, removing, or modifying any portion of the NOISE CONTROL SYSTEM (consisting of the exhaust system and air intake/cleaner assembly) with parts not certified to be noise legal for street use.
3. Loss of time, inconvenience, loss of motorcycle use or other consequential damages.
4. Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.

RECOMMENDATIONS FOR REQUIRED MAINTENANCE

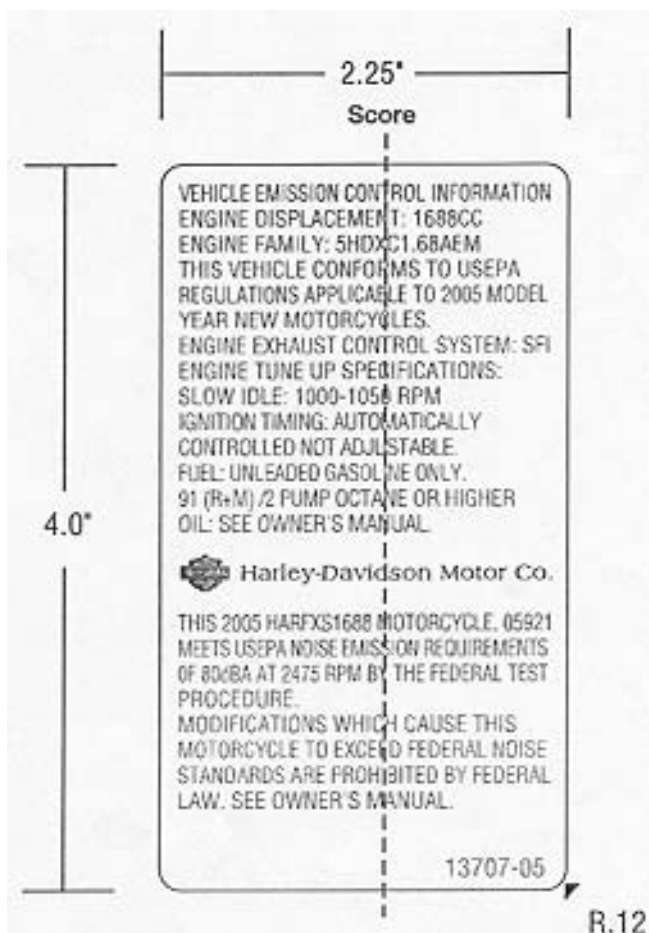
IT IS RECOMMENDED THAT ANY NOISE SYSTEM MAINTENANCE BE PERFORMED BY AN AUTHORIZED HARLEY-DAVIDSON DEALER USING GENUINE HARLEY-DAVIDSON REPLACEMENT PARTS. THE MAINTENANCE, REPLACEMENT OR REPAIR OF THE NOISE CONTROL SYSTEM MAY BE PERFORMED BY ANY OTHER QUALIFIED SERVICE OUTLET OR INDIVIDUAL. NON-GENUINE PARTS MAY BE USED ONLY IF SUCH PARTS ARE CERTIFIED TO COMPLY WITH U.S. ENVIRONMENTAL PROTECTION AGENCY STANDARDS.

Harley-Davidson Motor Company, P.O. Box 653 Milwaukee, Wisconsin 53201, U.S.A.

ISSUE DATE	REVISION NO.:	1	2	3	4		
03/23/79	REVISION DATE:	04/28/86	04/01/87	02/01/89	04/15/97		

LABEL INFORMATION

5HDXC1.68AEM



Part No. 13707-05

ISSUE DATE	REVISION NO.:	1	2				
07/17/02	REVISION DATE:	05/30/03	05/12/04				

HYPOTHETICAL APPLICATION USING NEW CSI DOCS. :

Certification Summary Information (CSI)

EPA/CARB Application Acceptance Date:

CSI.1 General Information (Model Year:)

US Manufacturer/ US Importer: Harley-Davidson Motor Company		Parent Company Name, if applicable: CARB mfr code: HDMX		Small MFR Recognition: N/A	
Engine Family Name: 8HDXC2.45AEE	ABT Engine Family: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> EPA only <input type="checkbox"/> CARB only <input type="checkbox"/> Both	Application Type: <input checked="" type="checkbox"/> New <input type="checkbox"/> Correction <input type="checkbox"/> Running Change		CARB: <input type="checkbox"/> SVM EPA: <input type="checkbox"/> SVM <input type="checkbox"/> USVM Certify by Design: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Evaporative/ Permeation Family Name (s): Pemeation family A		Sales Areas (of all vehicles in the engine family): <input checked="" type="checkbox"/> 50 States <input type="checkbox"/> 49 States <input type="checkbox"/> California Only <input type="checkbox"/> 49 States + California <input type="checkbox"/> 50 States + California <input type="checkbox"/> 50 States + 49 States <input type="checkbox"/> 50 States + 49 States + California		If your are not the OEM of the vehicle or engine to be certified, please indicate: Name of Vehicle OEM: Same Country: USA Name of Engine OEM: Same Country: USA	
Vehicle/Engine Category: <input checked="" type="checkbox"/> HMC <input type="checkbox"/> OFMC <input type="checkbox"/> ATV.A <input type="checkbox"/> ATV.B <input type="checkbox"/> UTV <input type="checkbox"/> ENG <input type="checkbox"/> CARB.NC					
Applicant Comments:					

CSI.2: EPA/CARB Emission Standards and Certification Levels (CARB HMC Early Compliance Multiplier: N/A)

	EPA Exhaust Emissions (units: <input checked="" type="checkbox"/> g/km; <input type="checkbox"/> g/kw-hr)				CARB Exhaust Emissions (units: <input checked="" type="checkbox"/> g/km; <input type="checkbox"/> g/bhp-hr)				Permeation HC Emissions (Unit: (g/m ² /day) (EPA only)		Vehicle Evaporative Emissions (Unit: g/test) (HMC CARB-only)
Air Pollutant	HC	NOx	HC+NOx	CO	HC	NOx	HC+NOx	CO	Fuel Tank	Fuel Hoses	Diurnal + Hot Soak
Certification Level	1.285	.166	1.451	9.166	1.285	.166	1.451	9.166	1.45	3.630	1.42
Emission Standard			1.4	12.0			1.4	12.0	1.5	15	2.0
Family Emission Limit			1.6	N/A			1.6		1.5		

CSI.3 Engine Family Description

Fuel System (see CSI.4) TBI	Number of Cylinders: Valves per Cylinder:
	Fuel Type: <input checked="" type="checkbox"/> Gasoline <input type="checkbox"/> LPG <input type="checkbox"/> NG <input type="checkbox"/> Other:
Engine Type: <input checked="" type="checkbox"/> Reciprocating <input type="checkbox"/> Rotary <input type="checkbox"/> Turbine <input type="checkbox"/> Other:	Engine Cooling Media: <input type="checkbox"/> Air <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Other:
Combustion Cycle: <input checked="" type="checkbox"/> 4-Stroke <input type="checkbox"/> 2-Stroke <input type="checkbox"/> Other:	Exhaust Useful Life (years): Exhaust Useful Life (hours):
Cylinder Arrangement: <input type="checkbox"/> Inline <input checked="" type="checkbox"/> Vee <input type="checkbox"/> Flat <input type="checkbox"/> Other:	Exhaust Useful Life (distance): 30,000 Unit: <input checked="" type="checkbox"/> km <input type="checkbox"/> mile
New Technology: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, technology explanation: SAI. Reed valve operated by engine load/vacuum to inject air	

CSI.4: Exhaust Emission Control Information (use SAE J1930 technology abbreviations)

Catalytic Converter: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes: Number of catalytic converter (s): 2 Catalyst Configuration: <input checked="" type="checkbox"/> Parallel (P) <input type="checkbox"/> Series (S) <input type="checkbox"/> P+S Catalyst Type: <input checked="" type="checkbox"/> Oxidation (OC) <input type="checkbox"/> Three-way (TWC) <input type="checkbox"/> OC+TWC
Exhaust Gas Recirculation (EGR): <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes: EGR Type: uncontrolled, natural
Electronic Controls: <input checked="" type="checkbox"/> ECM <input type="checkbox"/> ICM <input type="checkbox"/> Other:
Feedback Sensor: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes: Number of oxygen sensor (s): Sensor Configuration: <input type="checkbox"/> Parallel (P) <input type="checkbox"/> Series (S) <input type="checkbox"/> P+S Sensor Type: <input type="checkbox"/> O2S <input type="checkbox"/> HO2s <input type="checkbox"/> AFS
Air Injection: <input type="checkbox"/> PAIR <input checked="" type="checkbox"/> AIR <input type="checkbox"/> Other:
Fuel System: <input checked="" type="checkbox"/> TBI <input type="checkbox"/> MFI <input type="checkbox"/> SFI <input type="checkbox"/> DGI <input type="checkbox"/> Other: <input type="checkbox"/> Carburetor <input type="checkbox"/> Gaseous Carburetor <input type="checkbox"/> Carburetor: Number of Carburetors: Barrels per Carburetor:
Method of Air Aspiration: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> SC <input type="checkbox"/> TC <input type="checkbox"/> SAA <input type="checkbox"/> TAA <input type="checkbox"/> SAW <input type="checkbox"/> TAW <input type="checkbox"/> Other

Certification Summary Information (CSI – continue)

CSI.5: Exhaust Emission Data Vehicle/Engine and Test Data

EDV ID (or VIN): H139-X EDV Type: <input checked="" type="checkbox"/> New <input type="checkbox"/> Carryover, from EF: Model Name:		Displacement (cc): 2,450	N/V Ratio: 35.0	EIM (kg): 630						
		Rated Power @ rpm: 100 @4,000	Configuration: V-twin	Tire Pressure: 38 PSI						
		Transmission: manual 5	Curb Mass: 1,260 lbs.	Road Load Horsepower: 62 bhp <input type="checkbox"/>						
Assigned DF: <input checked="" type="checkbox"/> N/A <input type="checkbox"/> EPA SVM <input type="checkbox"/> ARB SVM <input type="checkbox"/> 50-State SVM Test Type: <input checked="" type="checkbox"/> Chassis <input type="checkbox"/> Engine (J1088) <input type="checkbox"/> Other:										
Test Date (MM/DD/YY)	Test Number	Test By "E"-EPA "A"-ARB "M"-MFR	Test for "C"-Cert "R"-RC "O"-Other	Test Fuel I-Indolene, P-CA Phase 2	Tested at <input checked="" type="checkbox"/> km <input type="checkbox"/> hr	Raw Emission Test Results (Note: Unit should be the same as the emission standards for the EF)				
						HC	NOx	HC + NOx	CO	CO ₂
11/13/07	HD46362	M	C	I	3,530	.908	.201		11.14	188
12/21/07	HD47679	M	C	I	8,077	1.152	.181		7.388	173
12/21/07	HD65834	M	C	I	8,107	.983	.182		9.855	180
2.05/08	HD 76456	M	C	I	15,029	1.095	.166		9.166	190
For EPA Certification (50 States and 49 State)		EPA Deterioration Factor (<input type="checkbox"/> Additive <input checked="" type="checkbox"/> Multiplicative)				1.174	1.000		1.000	
		EPA Certification level				1.285	.166	1.451	9	
For ARB Certification (50 State or CA only)		CARB Deterioration Factor (Multiplicative Only)								
		CARB Certification level								
DDV Information, if different that EDV:										
Manufacturer Comments:										

CSI.6A: Permeation Emissions Control/Test Data

Certify by Emission Testing						
Equipment	Material	Thickness (mm)	Total Inside Area (m ²)	Test Data (g/m ² /day) <input checked="" type="checkbox"/> Evap/Perm Test <input type="checkbox"/> Carryover, from: MY: EF:	DF (g/m ² /day) <input checked="" type="checkbox"/> New <input type="checkbox"/> EPA DF for SVM <input type="checkbox"/> Carryover, from: MY: EF:	Emissions with DF (g/m ² /day)
Fuel Tank	Nylon-6	6.1	.75	.45	1.003	1.453
Fuel line	viton	2.1	1X 10-3	3.1	.510	3.620
Certify-by-Design						
Fuel Tank	Fuel tank permeability control technology applied is 40 CFR §1051.245, Table 1, control technology: <input type="checkbox"/> (i) <input type="checkbox"/> (ii) <input type="checkbox"/> Other: N/A					
Fuel line	Fuel lines permeability control technology applied is 40 CFR §1051.245, Table 2, control technology: <input type="checkbox"/> (i) <input type="checkbox"/> (ii) <input type="checkbox"/> Other: N/A					
Manufacturer Comments: new						

CSI.6B: Evaporative Emissions Control/Test Data (Highway Motorcycle – CARB-only)

Vehicle Evaporative Emissions Information										
Evaporative Emission Test Vehicle Information				Evaporative Testing Result (raw data : g/test)			Evaporative Deterioration Factors (Additive Factors)			Certification LEVEL (g/test) = {(Diurnal+Hot Soak) + Overall DF}
Evaporative Family	Test Vehicle ID Number	Test Date	Test Type*	Diurnal	Hot Soak	Diurnal + Hot Soak	Vehicle DF	Bench DF	Overall DF : (vehicle + bench)/2	
8HDXE0066AAA	344	July 2007	EDV	.33	.61	.94	.45	.50	.475	1.42
Manufacturer Notes:										

* Test Type: evaporative emission data vehicle (EDV), or vehicle DF emission data vehicle (VDV) or bench emission DF data vehicle (BDF)

Certification Summary Information (CSI – continue)

CSI.7: Models Covered

	Vehicle/Engine Models Covered					
Make (Marketing Division)	FLHTRSHCE	FLHTR-SE-9				
Model Name	Heritage Ultra Tail	Heritage Ultra Tail Special				
Engine Code	9-P22-22	9-P22-22				
Vehicle Category	Class III	Class III				
Bore (mm)	112..5	112.5				
Displacement <input type="checkbox"/> Liter <input checked="" type="checkbox"/> cm ³	2,450	2,000				
Rated Power (kW)	98	80				
RPM @ Rated Power	5,000	5,000				
Rated Torque (nt-m)	133	110				
RPM @ Rated Torque	3,500	3,400				
Un-governed Rated Speed (rpm)	same	same				
Curb Mass (kg)	582 kg.	577 kg				
Transmission (M5, A3, etc.)	M5	M5				
Label Type ¹	49 state	49 state				
Emission Control System (model / rating specific)	TBI,SAI, OC	TBI,SAI,OC				
Projected Sales (CBI) -- CA Only	2,002	1,005				
Projected Sales (CBI) -- US Total (Includes CA Sales)	22,005	9,000				
CARB ONLY: California ATV Specification (Category ATV.A) (Use Yes or No to answer.)						
Vehicle Characteristics						
50 “ or Less in Width?						
4 Low Pressure Tires?						
Seat Straddled by Operator?						
Without Passenger Seating?						
Handlebar?						
Max Payload 350 lbs?						
(CARB Staff Only)						
California ATV? (Y / N)						
Staff Notes						

¹ Specify, use: “1” for California sales with California label; “2” for 50-state sales with 50-state label; “3” for 49-state sales with 49-state label; or “4” for California and 49-state sales with California and 49-state labels or with California and 50-state label
EPA Presentation – 3-1-05 rev